

ATTACHMENT A
DRAFT MANAGEMENT PLAN
Proposed Spotted Dog Wildlife Management Area

INTRODUCTION

Montana Fish, Wildlife and Parks (FWP) proposes to purchase fee-title ownership of lands to establish the Spotted Dog Wildlife Management Area (WMA). FWP offers this draft management plan as an instrument for disclosing its management intent to the public, for inviting public comment, and for documenting and preserving existing information and understandings for future reference. This initial overview will serve as a framework for attaching enhancements as they are gathered over time.

Goals:

- Permanently protect fish & wildlife resources;
- Enhance critical winter habitat for elk, mule deer, and antelope;
- Maintain migratory patterns to and from the National Forest for a regionally significant elk herd;
- Provide lasting public access to previously inaccessible lands;
- Maintain landscape connectivity between the Blackfoot and Clark Fork watersheds;
- Replace lost and injured natural resources that were the subject of Montana v. ARCO.

I. ACQUISITION DATE

FWP plans to acquire the property in Fall 2010, pending public review, approval, and funding.

II. CHAIN OF OWNERSHIP

RY (also known as YT) Timber is the current landowner; however, Rock Creek Cattle Company (RCCC) has an option to acquire the property that is valid until November 1, 2011. FWP would acquire the property from RCCC with no encumbrances (i.e., no timber or grazing reservations).

III. PROPERTY DESCRIPTION

Location

The land is bounded by Highway 12 to the north, Interstate 90 to the west, Fred Burr Creek to the south and Elliston Creek to the east. Elliston, Avon, Garrison, and Deer Lodge are all within 5 miles or less of a property boundary (Figure 1).

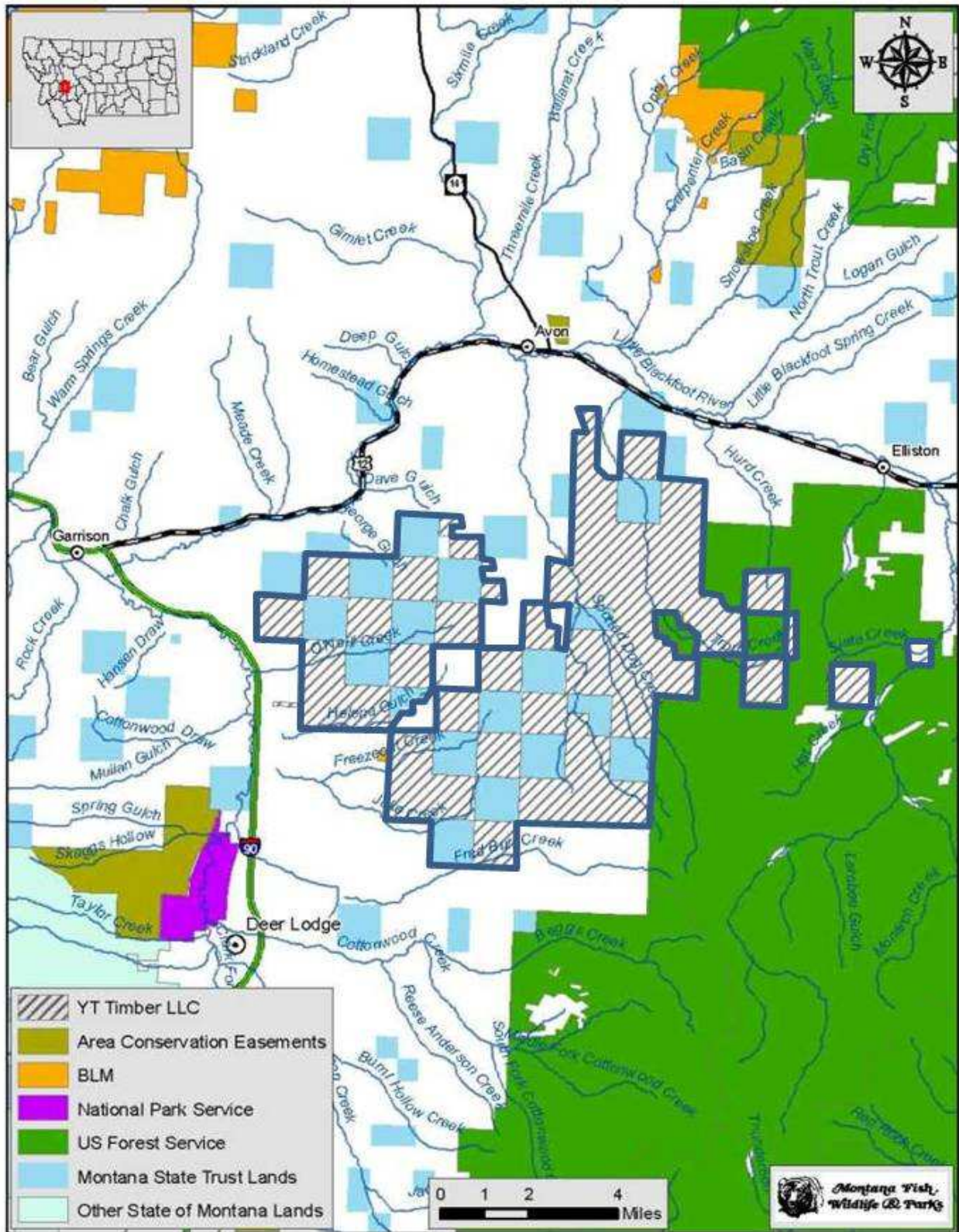


Figure 1. Draft boundary around deeded (hatched) and leased lands in the Spotted Dog WMA

Acreage Deeded

Spotted Dog WMA would encompass 27,616.35 deeded acres, generally described as follows:

- T8N, R8W: All of Sections 1, 3, 5, 7, 9, 11, 13, 14, 15, 17, 18, and 21
Portion of Section 2
- T8N, R9W: All of Sections 1 and 2
Portion of Section 3
- T9N, R7W: All of Sections 7, 18, 19, 21, 29, 31, 33, and 35
Portions of Sections 20, 27, and 30
- T9N, R8W: All of Sections 1, 11, 13, 14, 19, 23, 24, 25, 29, 31, 33, 35, and 36
Portions of Sections 2, 17, 21, 22, 26, and 27
- T9N, R9W: All of Sections 23, 25, 27, and 35
- T10N, R8W: Portion of Section 35

Acreage Leased

FWP plans to lease 10,260.35 acres from the Montana Department of Natural Resources and Conservation (DNRC), which are intermingled with the deeded acres. These acres comprise only those DNRC lands currently leased by the seller (Rock Creek Cattle Company). FWP's intent would be to lease the equivalent of the livestock grazing rights for the purpose of providing herbaceous and shrub forage and cover for wildlife, consistent with FWP's purposes for owning Spotted Dog WMA.

Total Acreage

The combined deeded and leased lands in the proposed Spotted Dog WMA would total 37,877 acres (Figure 1).

IV. LANDFORMS AND DRAINAGE

The proposed Spotted Dog WMA lies between the Garnet and Boulder Mountains, adjoining the Deer Lodge Valley and Clark Fork River plain (Figure 2).

The western half of the WMA generally drains into the Clark Fork and its topography is gently sloping (Figure 2). The eastern half drains into the Little Blackfoot River, and is more deeply incised, and steeply sloping, between broad, prominent benches and plateaus. Several rocky outcrops and small cliffs are present, especially in the vicinity of Beacon Hill, located on DNRC land at the head of George Gulch (Figure 1), near the north boundary of the area. Spotted Dog Creek is the largest drainage and portions of Trout, O'Neill, Freezeout, Jake, and Fred Burr Creeks also traverse the property (Figure 1).

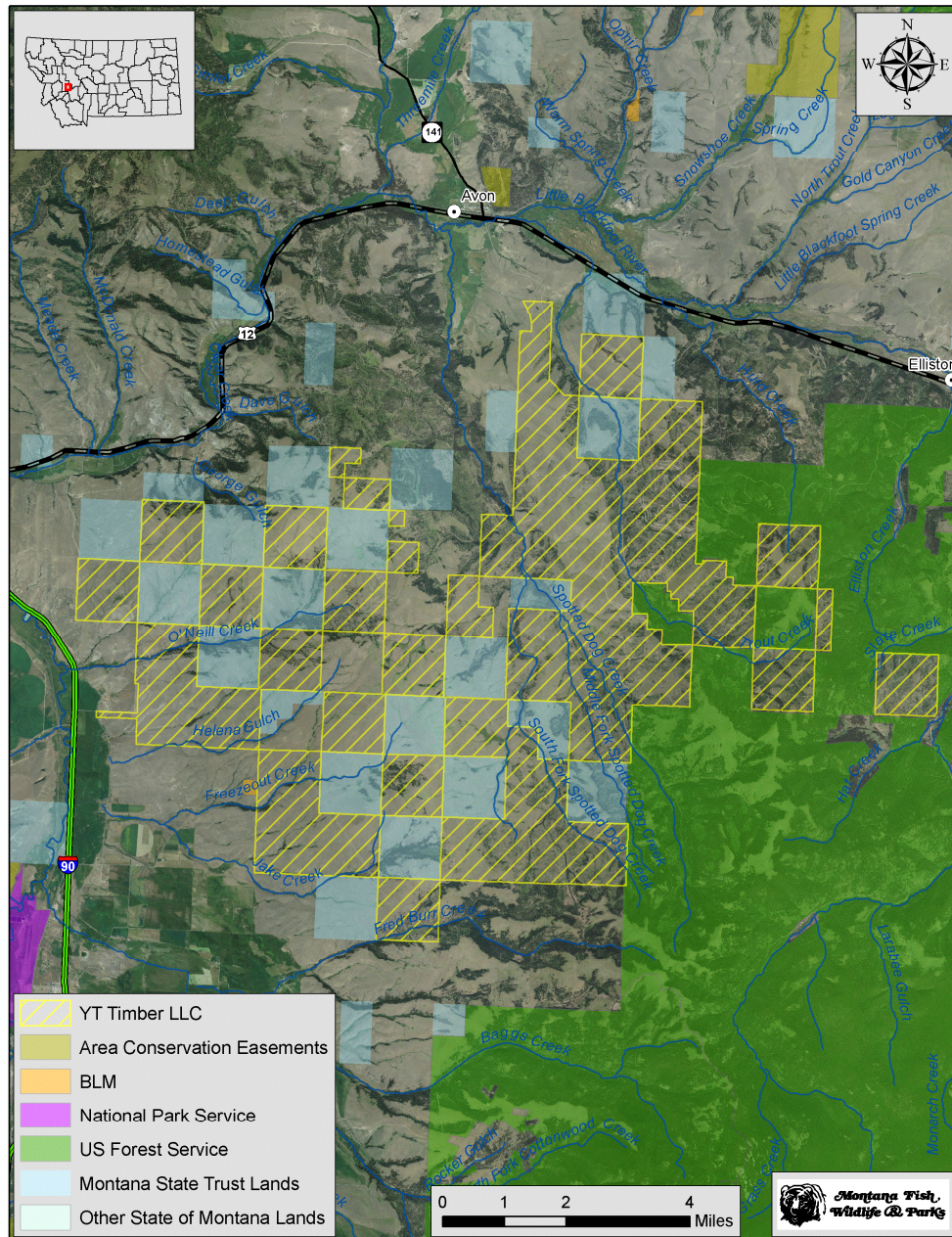


Figure 2. Topographic position of the proposed Spotted Dog WMA.

V. VEGETATION

Vegetation cover is 30% coniferous forest and 62% native grassland or shrub-grassland (Table 1). Numerous springs scattered throughout the area are surrounded by patches of cottonwoods, aspen, or deciduous shrubs. Less than 1% of the WMA is classified as developed or cultivated.

Most of the forested acres are located near Forest Service land in the Eastern half of the proposed WMA (Figure 2).

Table 1. Habitats on Spotted Dog WMA from refined Montana land-cover map for the Upper Clark Fork River Basin. (Based on refinements by Montana Natural Heritage Program in 2009.)

Habitat Type	<i>Acres</i>
Lower montane, foothill, & valley grasslands	12,420.6
Douglas-fir forest	4,158.8
Montane sagebrush steppe	2,719.0
Lodge pole pine	1,794.7
Harvested forest	1,750.0
Subalpine-upper montane grassland	1,628.8
Mesic meadow	1,317.0
Ponderosa pine	435.5
Riparian woodland	411.4
Wet meadow	207.9
Deciduous shrub land	185.9
Subalpine spruce	135.2
Aspen	69.2
Developed	50.9
Limber pine - juniper woodland	13.3
Water	9.8
Cliffs & canyons	5.3
Emergent marsh	2.0
Agriculture	0.4
<i>TOTAL classified habitats</i>	<i>27,315.70</i>

Land Use

Cattle have grazed the proposed Spotted Dog WMA since the late 1800s. Current stocking is approximately 2,000 cow-calf pairs. Hay is produced and harvested on a small portion of the property. Most of the merchantable timber has been harvested. Recreational use generally has been limited to family and friends of the owners.

Vegetation Condition

All but a minor percentage of the native vegetation communities remain intact. Native grasslands generally are in fair to good condition. Coniferous forests are recently harvested and in early successional stages, with good regeneration. Riparian areas and streambanks are impacted across a significant portion of the property.

Weeds and Forest Pathogens

Noxious weeds are present on the property—primarily spotted knapweed and hound's-tongue. Weeds do not dominate the vegetation in any location and occur at manageable levels. Knapweed and hound's-tongue densities generally are highest in the western half of the property, and are less prevalent in the eastern half. Interspersion of weeds with antelope bitterbrush poses a management challenge because bitterbrush—an important native forage plant—is sensitive to herbicides. Ground has been scarified with recent timber harvest and weeds are establishing.

The property is in a landscape impacted by mountain pine beetle. Most of the timber affected by mountain pine beetle on the proposed Spotted Dog WMA has already been removed, although spots remain.

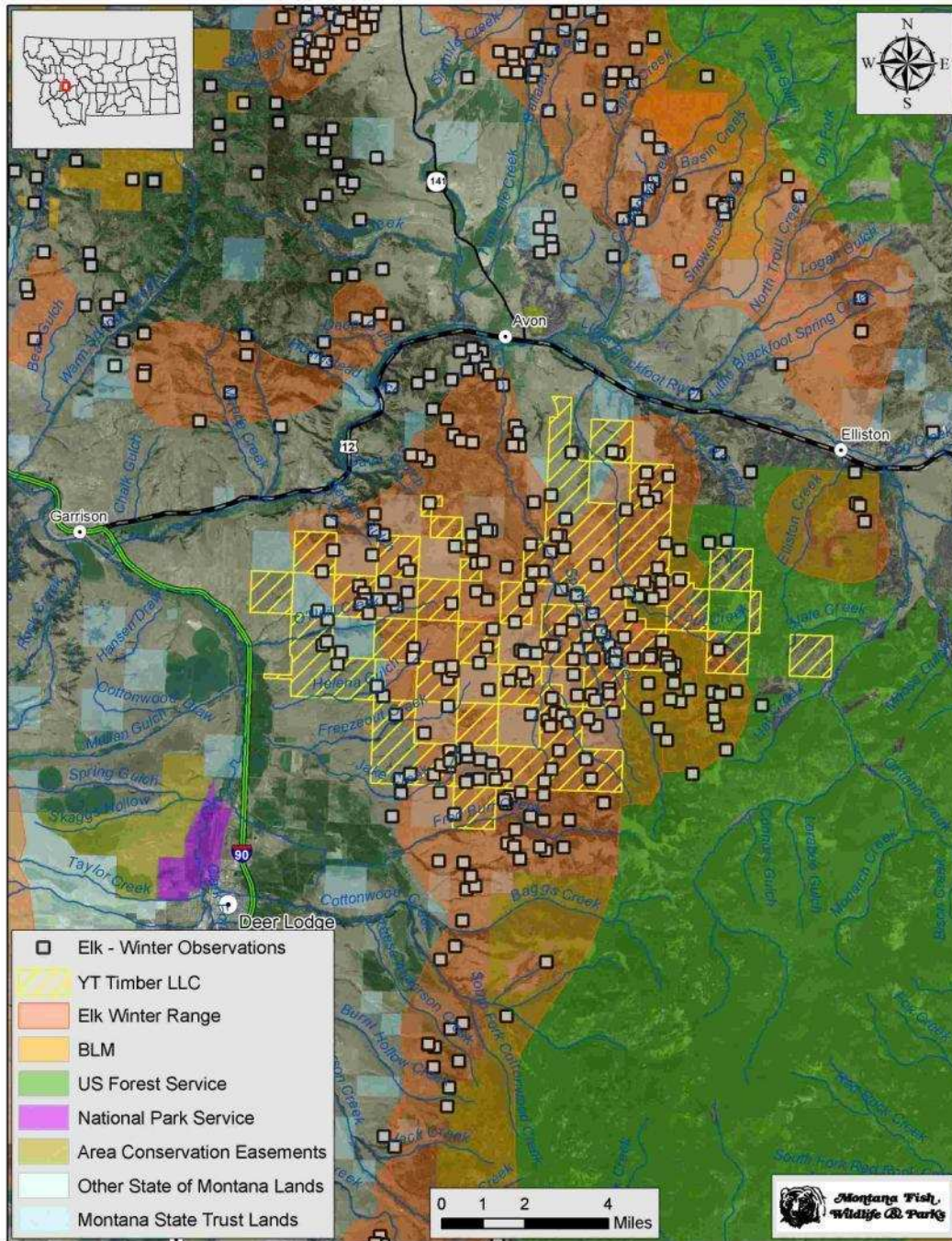
VI. EXCEPTIONAL WILDLIFE HABITAT QUALITIES

The proposed Spotted Dog WMA is exceptional in the quantity of intact native grassland that would be conserved for wildlife within its boundaries. Currently, deeded and leased acres constitute the second-largest block of privately owned native grasslands in Montana, west of the Continental Divide. Management activities should serve to maintain and enhance the native species composition and connected, unbroken expanse of this relict landscape. Activities should be avoided that would diminish native vegetation, increase establishment and spread of non-natives, or otherwise fragment the existing intact landscape. It is the size and expanse of this grassland habitat complex, coupled with its native qualities, which make it exceptional and especially worthy of perpetual conservation.

Antelope bitterbrush and rough fescue communities exist on the property in significant abundance. Both communities are limited, uncommon, and apparently declining in their occurrences across western Montana, yet both are exceptionally valuable as forage for elk and mule deer, as well as food and cover for a variety of wildlife. Management activities should feature the conservation of bitterbrush and rough fescue communities on the property.

Spotted Dog is exceptional in the availability of surface water scattered across the property, in the form of seeps, springs and creeks. These waters and wet meadows greatly enhance the ability of the land to attract and produce wildlife. Aspen and cottonwood occur in many of these wet areas at present. Riparian areas constitute a significant opportunity and need for improvement with future management, which would contribute considerable fish and wildlife diversity.

Spotted Dog is exceptional winter range for elk, mule deer and antelope—quite likely among the best remaining winter ranges in Montana (Figure 3). Topography, vegetation, connectivity, size and juxtaposition with elk and deer summer ranges along the Continental Divide are the primary contributing factors to the inherent quality of this property as big game winter range. In addition to considerations of soil and vegetation, management actions should serve to prevent human disturbance of wintering wildlife to avoid displacing populations from traditional winter ranges and to minimize loss of body-fat reserves before spring. Management should include cooperation with the Forest Service to enhance summer ranges and security to maintain migratory patterns and traditions of deer and elk.



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Figure 3. Elk groups observed during winter aerial surveys on the proposed Spotted Dog WMA

Spotted Dog has the potential to provide new and exceptional opportunities for hunting and wildlife viewing by the public. The expansive size of the property and fortuitous lay of the land, coupled with sweeping view-sheds, are outstanding assets of regional significance for wildlife appreciation. Management should maintain an open road system sufficient to allow people of all abilities the opportunity to attain views and key points of access for parking and hiking or

hunting. However, it is critical to the success of the project that motorized access be strategically managed to allow big game to continue using the property in hunting season. A balance between access and habitat security should be achieved to serve both interests.

Wildlife

Spotted Dog provides habitat for an estimated 181 vertebrate species, which include small and large mammals (58), birds (115), reptiles (2), amphibians (3), and fish (3) listed in Appendix A. Twenty five of these species are listed as statewide species of concern (SOC; Appendix B) with 10 of those 25 considered of greatest conservation need (Tier 1 species from the Comprehensive Fish & Wildlife Conservation Strategy; CFWCS 2005). Of these, the property provides important habitat for grassland species, such as long-billed curlews. Spotted Dog provides habitat for 7 big-game species—elk, antelope, mule & white-tailed deer, moose, black bear, mountain lion; 6 furbearers—beaver, muskrat, mink, marten, bobcat, wolverine; 2 carnivores listed as *Threatened* under the Endangered Species Act (ESA) –lynx, grizzly bear; and 1 delisted carnivore—wolf; as well as habitat for 42 other mammals (17 rodents, 7 carnivores, 6 shrews, 9 bats, 3 rabbits). Some species, like badgers, may be present year-round and other species, like Canada geese, may only stop over for a few nights. As pioneering grizzly bears have demonstrated, the area provides a movement corridor from the Blackfoot south to the Clark Fork and beyond.

Fisheries

Aquatic resources on Spotted Dog include 4½ miles of Spotted Dog Creek as well as most of its tributaries (11 miles in Middle, South & West Forks), 4 miles of Trout Creek, and 4 miles of O'Neil Creek. The headwaters of Spotted Dog, Trout, and O'Neill Creeks sustain what based on past testing are likely genetically pure westslope cutthroat trout. Jake, Freezeout, and Fred Burr Creeks are largely ephemeral, and only Fred Burr is known to support fish.

VII. IMPROVEMENTS AND DEVELOPMENTS

Approximately 60 miles of fence are present and functional around the perimeter of the property for controlling cattle and generally demarcating the proposed WMA boundary (Figure 4). Additional interior fencing is also present.

Approximately 117 miles of primitive roads (primarily jeep trails and timber haul routes) cross the property, originating from access points near Deer Lodge, Avon, and Elliston (Figure 4). Access from Elliston is via Forest Service road #314 (the Tree Farmers Road), while access from Deer Lodge and Avon is on ranch roads that are gated at their junction with county roads.

An old homestead, shop, and modular home are located in the center of the Eastern half of the Spotted Dog property (Figure 4). The buildings are not occupied and serve as storage and occasional bunking facilities.

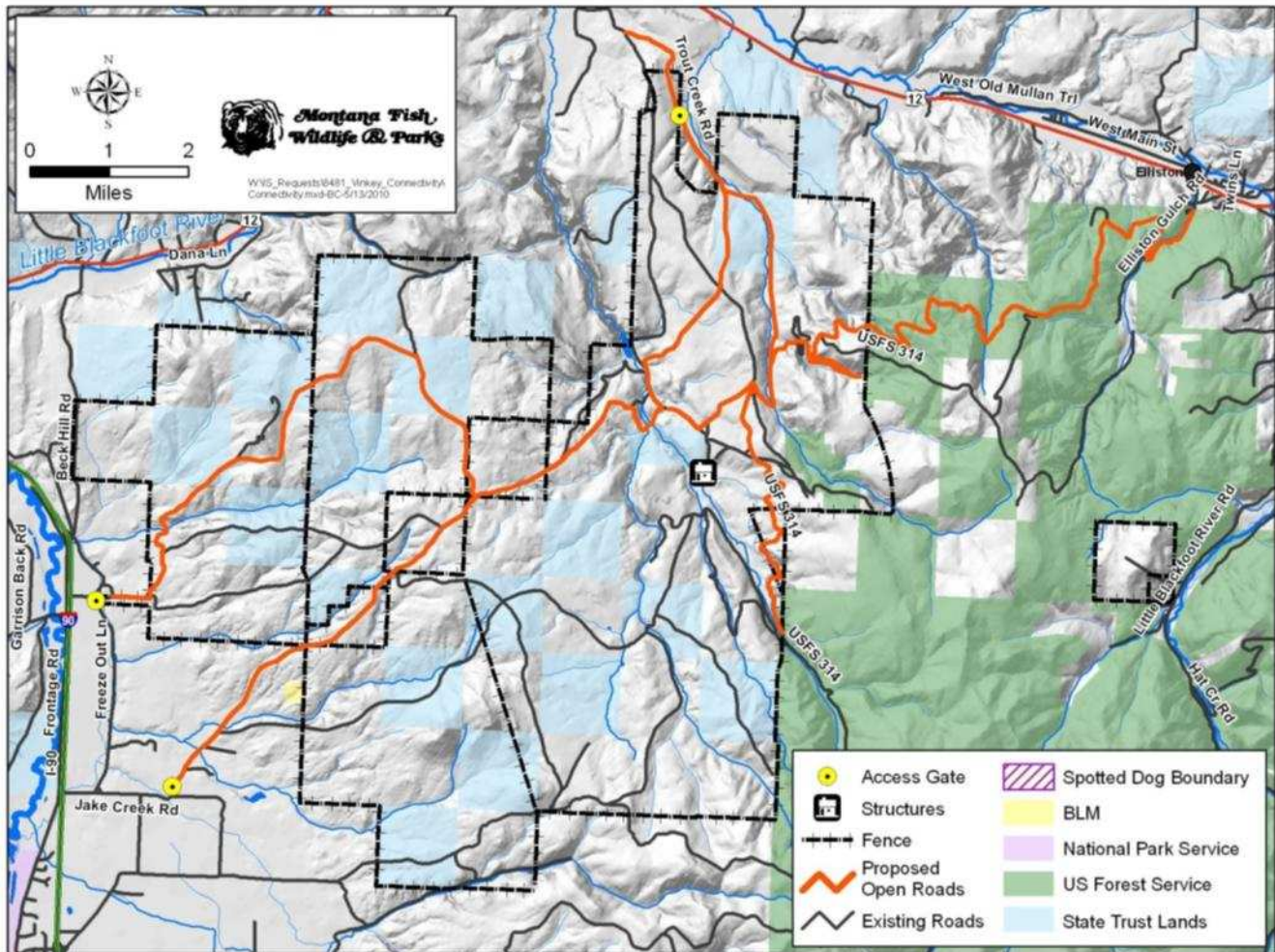


Figure 4. Existing fences, roads, access gates, and outbuildings on the proposed Spotted Dog WMA.

MANAGEMENT OVERVIEW

Spotted Dog WMA would be managed in a manner consistent with that of other WMAs owned and managed by FWP (e.g., Blackfoot-Clearwater, Lost Creek, Garrity Mountain, Fleecer Mountain, and Sun River). Management priority would be for the benefit of native fish and wildlife resources. Public access would be provided to the extent that such access is compatible with the stewardship of soil, native vegetation, and the endemic fish and wildlife resources. Vegetation management by way of livestock grazing, commercial timber harvest, or other land use practices may be prescribed if and as needed in the future to enhance the fish and wildlife values of the property, and their connection with the larger landscape. FWP strives to be a good neighbor, and would cooperate with adjoining landowners on noxious weed management, fence maintenance, historic and necessary road access, and other issues common to the local community. Maintenance and management would be headquartered locally, at Warm Springs WMA.

I. PUBLIC ACCESS

- Spotted Dog WMA would be open to public use from noon on May 15 through November 30 for motorized travel on open roads for hiking, horseback riding, and mountain bicycling.
- Motorized vehicles would be restricted to the main, designated open road system (no motorized vehicles off roads or on closed roads).
- The designated open road system would include USFS #314, and likely include all or portions of the Trout Creek Road, Stagecoach Road, and the Beacon Hill Road. Arterial roads would be closed to motorized travel.
- Camping would be allowed (motorized vehicles restricted to the road shoulder or pullouts, and open fires prohibited).
- No firewood cutting.
- Permits required for groups of more than 15 people.
- Pack in, pack out garbage and litter.
- Hunting would be in accordance with regulations pertaining statewide and to Deer/Elk Hunting District 215.
- Outfitting will be prohibited within the WMA.
- The WMA would be closed to all public entry from December 1 until noon on May 15 to provide undisturbed access for elk, deer and antelope to critical winter habitat.
- Due to the winter closure, the WMA would be closed to the winter season for mountain lion hunting, and would open for bear at noon on May 15th.
- An exception to the winter closure would allow snowmobilers to continue using the pre-existing groomed trail system along Forest Service roads (Tree Farmer Road and Irish

Mine Road) in the eastern half of the property, where potential conflicts with wintering wildlife are minimal. Snowmobilers must stay on the groomed route.

- Commercial activities would be prohibited, except as authorized by permit, as specified by FWP's commercial use policy.

Issues:

- Road maintenance to reasonably support public travel will constitute a significant and recurring expense. The standard for public travel will be to reasonably accommodate a 4-wheel drive vehicle with good ground clearance, and to accommodate horse trailers to certain access points. This standard is currently met, but will require regular maintenance. Some road portions are nearly impassible when wet and subject to surface damage.
- Some roads and parking areas would need to accommodate horse trailers.
- Roads and culverts would be inspected for compliance with Best Management Practices (BMPs) and any noncompliance corrected.
- Powell County has clarified that the Stagecoach Road is a County Road.
- Illegal off-road travel is expected and will require regular monitoring and enforcement to minimize resource damage when the area is opened to the public.
- Efforts will have to be made in winter to enforce the restriction that snowmobilers stay on the groomed, marked trail system. Signage and outreach will be needed to make snowmobilers aware and increase their cooperation.
- Gates and barriers will be required for closing arterial roads to motorized vehicles.
- Arterial roads in excess of needs for management purposes or public access should be reclaimed as identified in future inventories.
- Signage will be required at the main access points to communicate the public access regulations on the WMA.
- Shed-antler hunting will likely be a popular activity enjoyed by the public on and after May 15th each year (beginning at noon on the 15th). FWP would plan for an enforcement presence to address trespass on the WMA during the winter closure period prior to May 15th, and to ensure that motorized vehicles stay on open roads when antler hunting legally begins.
- Boundary signage will be needed to identify the WMA property line in places where the public is likely to cross the boundary.
- Hardcopy brochures and FWP website updates would be prepared to communicate regulations and provide basic road maps for the public.

II. LIVESTOCK GRAZING

FWP would monitor the status of streambanks, riparian vegetation, and uplands, and consider grazing on a case by case basis. Livestock may be considered in the future as a tool for

managing forage quality and enhancing forb diversity, depending on the initial results of livestock exclusion. On some WMAs in Montana, FWP has entered into Cooperative Habitat Management Agreements and structured grazing systems with adjoining landowners, which provide for grazing treatments and periodic yearlong rest from livestock grazing on the private--as well as WMA--properties for the enhancement of elk forage (typically) across the broader landscape. FWP would be open to exploring such possibilities if they would appear to meet resource objectives in the future.

FWP would assume the DNRC grazing leases currently held by Rock Creek Cattle Company (as outlined in Figure 1), and would not graze livestock on those leases until such time in the future that a Cooperative Habitat Management Agreement might be developed on the WMA deeded acres.

Issues:

- Fence maintenance to exclude livestock—or possibly include cattle in the future—will be a major expense, with annual repair and periodic replacement required.
- Wildlife movement on and off the WMA would be better accommodated as the existing fence comes due for replacement over time, with the implementation of wildlife-friendly designs when old fencing is replaced.
- Interior fencing will be inventoried, the worst sections removed, and the best sections “stored” with gates opened and some sections rolled up to improve wildlife passage while maintaining infrastructure for a future grazing system, if warranted. Opportunities may exist to remove one or more strands of standing fence while still maintaining options for future livestock control.

III. NOXIOUS WEED MANAGEMENT

Noxious weed management would be conducted in accordance with the Montana Weed Management Plan (2008). In accordance with 7-22-215 MCA, the FWP is required to develop a noxious weed management plan, and to have the plan approved by the Powell County weed board (as well as provide a biennial report on its weed management activities). Prior to closing, FWP and Powell County will agree on a Weed Management Plan specific to the Spotted Dog property.

FWP’s first priority will be to document and map all noxious weed occurrences on the subject lands during the first growing season under FWP ownership. Any isolated patches of early invading species will be eradicated by the most efficient and effective means (e.g., hand-pulling, digging or herbicide spot treatment), depending on weed species and site limitations. Roadsides will be inspected annually for the purpose of detecting and eradicating any new weed introductions before infestations become established. A strategy will be developed to contain and control the spread of established infestations that are identified in the initial mapping effort, which would probably involve integrated application of chemical and biological controls.

FWP's priority for herbicide control of noxious weeds on the subject lands will be to spray roadsides and recent logging landings, skid trails, burn piles, and other disturbed sites. Roadside spraying and annual inspections (with spot eradication) are important strategies to prevent new weed establishments and spread. As an additional preventive measure, FWP will confine motorized traffic to designated open roads, and will otherwise avoid disturbance of the soil surface.

Issues:

- Leafy spurge, thistle, spotted knapweed and hound's-tongue are establishing on sites disturbed by logging. Infested sites adjoining "weed-free" grasslands and riparian areas threaten the habitats of highest wildlife value on the property. FWP would prioritize such sites of early weed establishment for herbicide treatments.
- Spotted knapweed is scattered through stands of antelope bitterbrush, which may be damaged by some of the more common herbicides. Knapweed control in bitterbrush would require the added expense of the most selective herbicides, and/or an effort to introduce biological controls.
- Noxious weed control will require cooperation and partnership with DNRC and private landowners on intermingled ownerships, as well as with Bonneville Power Administration power line right-of-way maintenance.

IV. FOREST MANAGEMENT

Most of the merchantable timber has been recently harvested from the Spotted Dog property. FWP's direction would be to recruit large trees and snags in the future for their value as wildlife habitat. Although forest management would be a management priority in the long run to recruit and maintain forest stands of highest value for wildlife, there would not be an immediate need for active forest management (with the possible exception of spot sanitation harvests for disease control).

Issues:

- FWP will consult with professional foresters to evaluate the need for sanitation harvests to address remaining spots of mountain pine beetle damage, and to monitor for any recurrent management needs in stands already harvested. FWP's primary motivation would not be the salvage of monetary value from dead or dying trees, because dead and dying trees provide important habitat for a diversity of wildlife. However, FWP would evaluate each situation for the potential of beetle infestations spreading to unaffected stands, and may choose to remove beetle-killed trees as a preventive measure and as a good neighbor where neighboring stands are at risk.

V. FIRE PREVENTION AND SUPPRESSION

Fire suppression on the Spotted Dog WMA would be covered by the county under an existing cooperative agreement with the state. Under this agreement, the county agrees to provide protection to all non-forest-district state properties in exchange for the state providing the county with training, equipment and some planning assistance. The state also agrees to assist the county when a fire is too big to handle and then picks up the tab of the county for that particular fire-fighting effort as part of their supplemental appropriation request. FWP also pays property taxes to the county, as do private landowners. FWP would consider whether paying for additional fire protection from DNRC would be warranted in this case.

Wildfires would be subject to immediate suppression upon detection. In an attempt to prevent human-caused ignitions, FWP and DNRC may institute temporary, emergency measures to progressively restrict public access if and as summer-fall drought conditions intensify in some years.

Prescribed fire may be used as a tool for enhancing aspen regeneration and herbaceous forage quality, and managing fuels in the forest understory, but only with public notice and in close coordination with DNRC and local fire management organizations.

VI. GOOD NEIGHBOR

FWP would develop and maintain effective working relationships with neighboring landowners. Priority would be placed on addressing and responding to matters of fence maintenance, weed control, and public trespass onto neighboring private lands along the WMA boundary.

Issues:

- Private in-holdings within the perimeter of the proposed Spotted Dog WMA require special consideration.
- FWP would respect the customary, prescriptive rights of access by private landowners and their guests across the WMA to their properties for historic uses and levels of use.
- FWP would not be obligated to grant access across the WMA for expanded private access beyond historic uses or levels of use.
- FWP would respect the senior water rights held by other water users.

VII. MAINTENANCE BUDGET

Following is a preliminary 5-year maintenance budget for the proposed Spotted Dog WMA. On June 8, 2010, the “core” of the WMA was inspected to inventory roads, fences, weeds and culvert locations. FWP personnel using Global Positioning Systems (GPS) mapped 43.9 miles of road (3,287 acres) within the core area. Because of time limitations, fence placement and condition was noted but not mapped. Also weeds and culvert locations were noted but not

mapped. From the data that was collected, we extrapolated road density and the above listed associated issues to the other parcels that were not inspected. FWP discovered that the road layer GIS map that has been generated and used for the NRDP grant application does not reflect new roads that were constructed for timber harvest. Because of the recent timber harvest and the associated issues that come with that disturbance, invasive plant species would impact large and diverse native plant communities in upland and riparian habitats. Listed below are the improvements and developments—with cost estimates—that would be needed to protect the habitat qualities of this WMA.

Roads

FWP estimates that 117 miles of primitive roads are located within the boundary of the WMA. FWP anticipates that many miles of unnecessary roads will be abandoned and restored. This includes road obliteration, removal of culverts, restoration of burned roadside slash piles and replanting of native grasses and forbs. The estimated time in manpower and equipment would be 480 hours of contracted services.

- Excavator @ \$140.00 per hour = \$67,200.00
- Backhoe @ \$95.00 per hour = \$45,600.00
- Bobcat @ \$75.00 per hour = \$36,000.00
- Road Grader @ 120.00 = \$4800.00
- Native grasses and forbs plant mix = \$14,600.00
- Broadcast planting ATV = \$7,300.00
- Maintain opened roads = Contracted services with miles yet to be determined = an estimated \$297,761.

Total \$472,761

Fences

An estimated 60+ miles of boundary fence exists on the property. Much of the current fence is 5-strand barbed wire with old wood posts or material gathered and used on site. The boundary fence is in poor shape in many places that we observed. Construction of a new wildlife friendly fence would be accomplished at a rate of 6 miles per year. The topography of the landscape would limit construction time as the many deep ravines would not only slow construction but would also require a large amount of time for maintenance. Average fence construction cost is \$12,000.00 per mile with a 5% increase each year.

- 30 miles fence (5 year period) @\$12,000.00 per mile (adjusted 5% per year) = \$397,830
- Estimated cost of interior fence removal (21 miles) @\$4900.00 per mile = \$102,900
- 5 year cost of personnel time @ 0.50 FTE = \$105,000.00

Total \$605,730

Weed Control

Currently, invasive plant species include Spotted Knapweed, Hoary Cress (whitetop), Common Mullen, Canada thistle, Leafy Spurge and Hound's-tongue. Many of these weeds are associated

with disturbed sites from timber harvest activities on both new and historic roadways. On the eastern half of the property many of the listed weeds are confined to the disturbed areas listed above. On the western half of the property weeds are present both on the disturbed areas and also interspersed across the west face that parallels Interstate 90. This more southwesterly facing landscape is of dryer aspect. Antelope bitterbrush is abundant here and is extremely valuable to wildlife as both for forage and cover. Spotted Knapweed is widespread throughout this area and is in direct competition with the bitterbrush. Aerial herbicide treatment and biological control insects would be used to manage the infestation of spotted knapweed. Using Transline™ as an herbicide of choice would help manage the spotted knapweed while not injuring the bitterbrush plants. But Transline™ is nearly double the cost of other herbicides used in treating spotted knapweed. Below is an estimated first year cost itemized; follow-up years of treatment would vary according to successes or failures in previous years.

- Roadside weed treatment for 117 miles of road (prior to road abandonment and restoration) is \$15,599 per year for five years for a total of \$77,995
- Treatment to 165 acres of slash piles, skid roads and equipment sites is \$6,600 per year for two years for a total of \$13,200
- One-time aerial herbicide spraying of an estimated 975 acres of spotted knapweed is \$46,250
- Biological control -- The annual cost of releasing insects 22 times per year is \$1,600. Over five years this totals \$8,000. The monitoring cost to determine effectiveness is \$1,400. The five year total for biological control of weeds is \$47,000.

5 year Total Estimated cost for Weed Management is \$146,649

Operations & Maintenance Total Cost

The items listed above have a cost estimate total for 5 years of \$1,225,140. This does not include taxes to be paid. Other significant costs include boundary line surveys, timber cruise, weed assessment survey and travel barriers where needed. As with other FWP- owned lands, maintenance is an ongoing process. New fences can be constructed but they must be maintained. Noxious weeds continually try to establish and must be treated. Roads erode over time or degrade from continual use. The potential for the Spotted Dog property to come into public ownership is a positive step forward, but with this acquisition comes management responsibilities that are both demanded by the recreating public and dictated by state law.

APPENDIX A. Spotted Dog Vertebrate Species List

List of all species of concern observed on or nearby the property, or likely to occur based on species distribution range and habitat suitability. On-site surveys are needed to verify occurrence of some species.

Common Name	Scientific Name	SOC	CFWCS Tier	Comments
Amphibians—3 Species				
Long-toed Salamander	<i>Ambystoma macrodactylum</i>			
Western Toad	<i>Bufo boreas</i>	SOC	1	
Columbia Spotted Frog	<i>Rana luteiventris</i>			
Birds—115 Species				
Great Blue Heron	<i>Ardea herodias</i>	SOC	3	
Canada Goose	<i>Branta canadensis</i>			
Mallard	<i>Anas platyrhynchos</i>			
Common Merganser	<i>Mergus merganser</i>			
Turkey Vulture	<i>Cathartes aura</i>			
Osprey	<i>Pandion haliaetus</i>			
Bald Eagle	<i>Haliaeetus leucocephalus</i>	SOC	1	ESA-delisted, monitoring
Northern Harrier	<i>Circus cyaneus</i>			
Sharp-shinned Hawk	<i>Accipiter striatus</i>			
Cooper's Hawk	<i>Accipiter cooperii</i>			
Northern Goshawk	<i>Accipiter gentilis</i>	SOC	2	
Swainson's Hawk	<i>Buteo swainsoni</i>	PSOC	2	
Red-tailed Hawk	<i>Buteo jamaicensis</i>			
Rough-legged Hawk	<i>Buteo lagopus</i>			
Golden Eagle	<i>Aquila chrysaetos</i>	SOC	2	
American Kestrel	<i>Falco sparverius</i>			
Peregrine Falcon	<i>Falco peregrinus</i>	SOC	2	ESA-delisted, monitoring
Prairie Falcon	<i>Falco mexicanus</i>			
Gray Partridge	<i>Perdix perdix</i>			
Dusky (Blue) Grouse	<i>Dendragapus obscurus</i>			
Ruffed Grouse	<i>Bonasa umbellus</i>			
Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>	SOC	1	
American Coot	<i>Fulica americana</i>			
Sandhill Crane	<i>Grus canadensis</i>			
Spotted Sandpiper	<i>Actitis macularius</i>			
Long-billed Curlew	<i>Numenius americanus</i>	SOC	1	

Common Name	Scientific Name	SOC	CFWCS Tier	Comments
Wilson's Snipe	<i>Gallinago delicata</i>			
Rock Pigeon	<i>Columba livia</i>			
Mourning Dove	<i>Zenaida macroura</i>			
Flammulated Owl	<i>Otus flammeolus</i>	SOC	1	Limited habitat
Western Screech-owl	<i>Megascops kennicottii</i>	PSOC	3	
Great Horned Owl	<i>Bubo virginianus</i>			
Northern Pygmy-Owl	<i>Glaucidium gnoma</i>			
Great Gray Owl	<i>Strix nebulosa</i>	SOC	2	Limited habitat
Northern Saw-whet Owl	<i>Aegolius acadicus</i>			
Common Nighthawk	<i>Chordeiles minor</i>			
Belted Kingfisher	<i>Megaceryle alcyon</i>			
Lewis's Woodpecker	<i>Melanerpes lewis</i>	SOC	2	
Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>			
Downy Woodpecker	<i>Picoides pubescens</i>			
Hairy Woodpecker	<i>Picoides villosus</i>			
American Three-toed Woodpecker	<i>Picoides dorsalis</i>			
Northern Flicker	<i>Colaptes auratus</i>			
Pileated Woodpecker	<i>Dryocopus pileatus</i>	SOC	2	
Olive-sided Flycatcher	<i>Contopus cooperi</i>		1	Recently removed from SOC list
Western Wood-Pewee	<i>Contopus sordidulus</i>			
Willow Flycatcher	<i>Empidonax traillii</i>			
Least Flycatcher	<i>Empidonax minimus</i>			
Hammond's Flycatcher	<i>Empidonax hammondi</i>			
Dusky Flycatcher	<i>Empidonax oberholseri</i>			
Cordilleran Flycatcher	<i>Empidonax occidentalis</i>			
Eastern Kingbird	<i>Tyrannus tyrannus</i>			
Horned Lark	<i>Eremophila alpestris</i>			
Tree Swallow	<i>Tachycineta bicolor</i>			
Violet-green Swallow	<i>Tachycineta thalassina</i>			
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>			
Bank Swallow	<i>Riparia riparia</i>			
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>			
Barn Swallow	<i>Hirundo rustica</i>			
Gray Jay	<i>Perisoreus canadensis</i>			Limited habitat

Common Name	Scientific Name	SOC	CFWCS Tier	Comments
Clark's Nutcracker	<i>Nucifraga columbiana</i>	SOC	3	
Black-billed Magpie	<i>Pica hudsonia</i>			
American Crow	<i>Corvus brachyrhynchos</i>			
Common Raven	<i>Corvus corax</i>			
Black-capped Chickadee	<i>Poecile atricapillus</i>			
Mountain Chickadee	<i>Poecile gambeli</i>			
Red-breasted Nuthatch	<i>Sitta canadensis</i>			
White-breasted Nuthatch	<i>Sitta carolinensis</i>			
Brown Creeper	<i>Certhia americana</i>	SOC	2	
Rock Wren	<i>Salpinctes obsoletus</i>			
House Wren	<i>Troglodytes aedon</i>			
Golden-crowned Kinglet	<i>Regulus satrapa</i>			
Ruby-crowned Kinglet	<i>Regulus calendula</i>			
Mountain Bluebird	<i>Sialia currucoides</i>			
Townsend's Solitaire	<i>Myadestes townsendi</i>			
Veery	<i>Catharus fuscescens</i>	SOC	2	
Swainson's Thrush	<i>Catharus ustulatus</i>			
Hermit Thrush	<i>Catharus guttatus</i>			
American Robin	<i>Turdus migratorius</i>			
Gray Catbird	<i>Dumetella carolinensis</i>			
Cedar Waxwing	<i>Bombycilla cedrorum</i>			
Northern Shrike	<i>Lanius excubitor</i>			
European Starling	<i>Sturnus vulgaris</i>			
Warbling Vireo	<i>Vireo gilvus</i>			
Cassin's Vireo	<i>Vireo cassinii</i>			
Orange-crowned Warbler	<i>Vermivora celata</i>			
Yellow Warbler	<i>Dendroica petechia</i>			
Yellow-rumped Warbler	<i>Dendroica coronata</i>			
Northern Waterthrush	<i>Seiurus noveboracensis</i>			
MacGillivray's Warbler	<i>Oporornis tolmiei</i>			
Common Yellowthroat	<i>Geothlypis trichas</i>			
Wilson's Warbler	<i>Wilsonia pusilla</i>			
Western Tanager	<i>Piranga ludoviciana</i>			
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>			
Lazuli Bunting	<i>Passerina amoena</i>			
Spotted Towhee	<i>Pipilo maculatus</i>			

Common Name	Scientific Name	SOC	CFWCS Tier	Comments
Chipping Sparrow	<i>Spizella passerina</i>			
Brewer's Sparrow	<i>Spizella breweri</i>			
Vesper Sparrow	<i>Pooecetes gramineus</i>			
Savannah Sparrow	<i>Passerculus sandwichensis</i>			
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	SOC	2	
Song Sparrow	<i>Melospiza melodia</i>			
Lincoln's Sparrow	<i>Melospiza lincolnii</i>			
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>			
Dark-eyed Junco	<i>Junco hyemalis</i>			
Snow Bunting	<i>Plectrophenax nivalis</i>			
Red-winged Blackbird	<i>Agelaius phoeniceus</i>			
Western Meadowlark	<i>Sturnella neglecta</i>			
Brown-headed Cowbird	<i>Molothrus ater</i>			
Northern Oriole	<i>Icterus galbula</i>			
Pine Grosbeak	<i>Pinicola enucleator</i>			
Cassin's Finch	<i>Carpodacus cassinii</i>	SOC	2	
Red Crossbill	<i>Loxia curvirostra</i>			
Pine Siskin	<i>Carduelis pinus</i>			
Evening Grosbeak	<i>Coccothraustes vespertinus</i>			
Fish—3 Species				
Westslope Cutthroat Trout	<i>Oncorhynchus clarkii lewisi</i>	SOC	1	
Brown Trout	<i>Salmo trutta</i>			
Brook Trout	<i>Salvelinus fontinalis</i>			
Mammals—59 Species				
Masked Shrew	<i>Sorex cinereus</i>			
Preble's Shrew	<i>Sorex preblei</i>	SOC	2	
Vagrant Shrew	<i>Sorex vagrans</i>			
Dusky or Montane Shrew	<i>Sorex monticolus</i>			
Water Shrew	<i>Sorex palustris</i>			
Pygmy Shrew	<i>Sorex hoyi</i>			
Little Brown Myotis	<i>Myotis lucifugus</i>			
Long-eared Myotis	<i>Myotis evotis</i>			
Fringed Myotis	<i>Myotis thysanodes</i>	SOC	2	
Long-legged Myotis	<i>Myotis volans</i>			
Western Small-footed Myotis	<i>Myotis ciliolabrum</i>			

Common Name	Scientific Name	SOC	CFWCS Tier	Comments
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	PSOC	2	
Big Brown Bat	<i>Eptesicus fuscus</i>			
Hoary Bat	<i>Lasiurus cinereus</i>	SOC	2	
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	SOC	1	
Mountain Cottontail	<i>Sylvilagus nuttallii</i>			
Snowshoe Hare	<i>Lepus americanus</i>			
White-tailed Jackrabbit	<i>Lepus townsendii</i>			
Yellow-pine Chipmunk	<i>Tamias amoenus</i>			
Red-tailed Chipmunk	<i>Tamias ruficaudus</i>			
Yellow-bellied Marmot	<i>Marmota flaviventris</i>			
Columbian Ground Squirrel	<i>Spermophilus columbianus</i>			
Golden-mantled Ground Squirrel	<i>Spermophilus lateralis</i>			
Red Squirrel	<i>Tamiasciurus hudsonicus</i>			
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>			
Northern Pocket Gopher	<i>Thomomys idahoensis</i>			
American Beaver	<i>Castor canadensis</i>			
Deer Mouse	<i>Peromyscus maniculatus</i>			
Bushy-tailed Woodrat	<i>Neotoma cinerea</i>			
Southern Red-backed Vole	<i>Clethrionomys gapperi</i>			
Heather Vole	<i>Phenacomys intermedius</i>			
Meadow Vole	<i>Microtus pennsylvanicus</i>			
Montane Vole	<i>Microtus montanus</i>			
Long-tailed Vole	<i>Microtus longicaudus</i>			
Muskrat	<i>Ondatra zebithicus</i>			
Western Jumping Mouse	<i>Zapus princeps</i>			
Porcupine	<i>Erethizon dorsatum</i>			
Coyote	<i>Canis latrans</i>			
Gray Wolf	<i>Canis lupus</i>	SOC	1	ESA delisted, monitoring
Red Fox	<i>Vulpes vulpes</i>			
Black Bear	<i>Ursus americanus</i>			
Grizzly Bear	<i>Ursus arctos</i>	SOC	1	ESA-threatened, suitable habitat for reoccupation
Raccoon	<i>Procyon lotor</i>			
Marten	<i>Martes americana</i>			
Ermine	<i>Mustela erminea</i>			
Long-tailed Weasel	<i>Mustela frenata</i>			

Common Name	Scientific Name	SOC	CFWCS Tier	Comments
Mink	<i>Mustela vison</i>			
Wolverine	<i>Gulo gulo</i>	SOC	2	
Badger	<i>Taxidea taxus</i>			
Striped Skunk	<i>Mephitis mephitis</i>			
Canada Lynx	<i>Lynx canadensis</i>	SOC	1	ESA-threatened
Bobcat	<i>Lynx rufus</i>			
Mountain Lion	<i>Puma concolor</i>			
Elk or Wapiti	<i>Cervus canadensis</i>			
Mule Deer	<i>Odocoileus hemionus</i>			
White-tailed Deer	<i>Odocoileus virginianus</i>			
Moose	<i>Alces alces</i>			
Pronghorn (Antelope)	<i>Antilocapra americana</i>			
Reptiles—2 Species				
Terrestrial Gartersnake	<i>Thamnophis elegans</i>			
Common Gartersnake	<i>Thamnophis sirtalis</i>			

APPENDIX B. Spotted Dog Species of Concern

List of all species of concern observed on or nearby the property, or likely to occur based on species distribution range and habitat suitability. On-site surveys are needed to verify occurrence of some species.

Species	Status	Habitat	Status in Spotted Dog Ranch vicinity
Species of Concern			
Westslope Cutthroat Trout (<i>Oncorhynchus clarki lewisi</i>)	SOC, Tier 1	Coldwater streams	Verified in area, in Spotted Dog, Trout, and O'Neil creeks
Canada Lynx (<i>Lynx Canadensis</i>)	Threatened, Tier 1	Subalpine conifer forests	Harvested near property
Fringed Myotis (<i>Myotis thysanodes</i>)	SOC	Riparian & dry mixed conifer forests	Suitable habitat in area, not verified
Gray Wolf (<i>Canis lupus</i>)	Delisted, SOC, Tier 1	Generalist	Verified on the property
Grizzly Bear (<i>Ursus arctos</i>)	Threatened, SOC, Tier 1	Generalist	Verified in area, suitable habitat
Hoary Bat (<i>Lasiurus cinereus</i>)	SOC	Riparian and forest habitats	Suitable habitat in area, not verified
Townsend's Big-eared Bat (<i>Corynorhinus townsendii</i>)	SOC, Tier 1	Caves and mines	Suitable roost sites near area, foraging habitat on property
Preble's Shrew (<i>Sorex preblei</i>)	SOC	Sagebrush/Grasslands	Suitable habitat in area, not verified
Wolverine (<i>Gulo gulo</i>)	SOC	Conifer forests	Harvested within 2 miles of eastern boundary
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Delisted, SOC, Tier 1	Riparian forests	Nesting pairs along Little Blackfoot, some foraging habitat on property
Brewer's Sparrow (<i>Spizella breweri</i>)	SOC	Sagebrush	Suitable habitat in area, not verified
Brown Creeper (<i>Certhia Americana</i>)	SOC	Mixed conifer forests	Verified on forest service lands near the property
Cassin's Finch (<i>Carpodacus cassinii</i>)	SOC	Conifer forests	Verified on forest service lands near the property
Clark's Nutcracker (<i>Nucifraga Columbiana</i>)	SOC	Conifer forests	Verified on forest service lands near the property
Flammulated Owl (<i>Otus flammeolus</i>)	SOC, Tier 1	Low-mid elevation conifer forests with large trees	Limited suitable habitat in eastern part of area, not verified
Golden Eagle (<i>Aquila chrysaetos</i>)	SOC	Generalist	Verified on property
Grasshopper Sparrow (<i>Ammodramus savannarum</i>)	SOC	Grasslands	Suitable habitat in area, not verified
Great Blue Heron (<i>Ardea Herodias</i>)	SOC	Riparian woodlands	Rookery on the Little Blackfoot near Garrison, foraging habitat on property

Species	Status	Habitat	Status in Spotted Dog Ranch vicinity
Great Gray Owl (<i>Strix nebulosa</i>)	SOC	Conifer forests	Limited suitable habitat in eastern part of area, not verified
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	SOC	Riparian forests	Verified on Clark Fork River west of the property
Long-billed Curlew (<i>Numenius americanus</i>)	SOC, Tier 1	Grasslands	Verified on property
Northern Goshawk (<i>Accipiter gentilis</i>)	SOC	Mixed conifer forests	Verified near the area, suitable habitat present
Peregrine Falcon (<i>Falco peregrines</i>)	Delisted, SOC	Cliffs, forages over riparian, wetland habitats	Foraging habitat in area, not verified
Sharp-tailed Grouse -- Columbian or prairie subsp. (<i>Tympanuchus phasianellus</i>)	SOC (Columbian)	Grasslands	Suitable habitat, not verified, possible reintroduction site
Veery (<i>Catharus fuscenscens</i>)	SOC	Riparian forests, shrubby habitats	Suitable habitat, not verified
Western Toad (<i>Bufo boreas</i>)	SOC, Tier 1	Wetlands, lakes, floodplain ponds	Suitable habitat, not verified
Potential Species of Concern			
Silver-haired Bat (<i>Lasionycteris noctivagans</i>)	PSOC	Riparian and forest habitats	Suitable habitat in area, not verified
Common Poorwill (<i>Phalaenoptilus nuttallii</i>)	PSOC	Open conifer woodlands	Suitable habitat in area, not verified
Swainson's Hawk (<i>Buteo swainsoni</i>)	PSOC	Sage/grasslands with woody draws	Suitable habitat, verified in Deer Lodge Valley
Western Screech-Owl (<i>Megascops kennicottii</i>)	PSOC	Riparian forests	Suitable habitat, not verified
An Agapetus Caddisfly (<i>Agapetus montanus</i>)	PSOC	Fast-flowing streams	Verified in Spotted Dog Creek north of the property
Additional Tier 1 Species			
Olive-sided Flycatcher (<i>Contopus cooperi</i>)	CFWCS Tier 1	Early seral forest/shrub patches, and burned forest	Verified on forest service lands near the area